

## REMARKS

### *Status of the Claims*

Claims 3-8, 17, 31-33, and 35-38 are currently pending and under examination.

Claims 3, 17, 31, and 33 are amended herein.

Claims 32, 35, and 36 are canceled herein without prejudice.

Claim 40 is newly presented.

All claims find support in the specification as originally filed.

Applicants reserve the right to reintroduce cancelled subject matter, for example, in later-filed continuing application(s).

No new matter is introduced by the present amendment.

### *Office Comment to Claims 3-8 and 17*

Applicants thank the Examiner for pointing out that “claims 3-8 and 17 are free of the prior art and would be allowable if issues surrounding nucleotides 291-2153 in part (c), as outlined above in the New Matter, 112 2<sup>nd</sup> paragraph and enablement rejections (2156 vs 2153) were obviated.” Office Action at page 11, lines 4-6.

Applicants believe that any alleged issues surrounding nucleotides 291-2153 are now obviated by the present amendment and remarks submitted herein.

### *Drawings – Annotated and Replacement Sheets for Figure 1*

An Annotated Sheet and a Replacement Sheet are submitted herewith for sheet 1 of 3 of the drawings (Figure 1). The only change made is to correct a typographical error by replacing the recitation “(nt 291-2156)” with “nt 291-2153),” which is now consistent with the nucleotides that are actually underlined in Figure 1. Applicants point out that the underlined coding sequence in Figure 1 begins with nt 291 (*i.e.*, “A”) and ends with nt 2153 (*i.e.*, “G”). Applicants also point out that nucleotides 2154, 2155, and 2156 of Figure 1 (which are not underlined) merely correspond to a “stop” codon (*i.e.*, “TAG”). Accordingly, “nt 291-2153” of SEQ ID NO:1

encode the amino acid sequence shown as SEQ ID NO:2 (see also Figure 2). No new matter has been added.

***Rejections under 35 U.S.C. § 112-2<sup>nd</sup> are Traversed or Rendered Moot***

The Office rejected Claims 3-8, 17, 31-33, and 35-38 as allegedly indefinite. Based on the foregoing amendment and the following remarks, Applicants respectfully assert that any alleged basis for this rejection is now moot or properly traversed.

***RE: Claim 3***

According to the Office, “Claim 3 is vague and indefinite because it is unclear what is encoded by nucleotides 291-2153 of SEQ ID NO:1.” Office Action at page 2, no. 3, lines 4-5. The Office states that “Figure 1 recites that the ORF of SEQ ID NO:1 is nucleotides 291-2156. Accordingly, it appears that there may be an unintentional typographical error in amended claim 3 part (c). Written support could not be found for nucleotides 291-2153 of SEQ ID NO:1 ...” Office Action at page 2, no. 3, lines 6-10.

Figure 1 is amended herein to correct a typographical error. More specifically, Figure 1 is amended to recite “(nt 291-2153)” consistent with the underlined nucleotides of Figure 1. Applicants point out that the underlined coding sequence in Figure 1 begins with nt 291 (*i.e.*, “A”) and ends with nt 2153 (*i.e.*, “G”). Applicants also point out that nucleotides 2154, 2155, and 2156 of Figure 1 (which are not underlined) merely correspond to a “stop” codon (*i.e.*, “TAG”). Accordingly, “nt 291-2153” of SEQ ID NO:1 encode the amino acid sequence shown as SEQ ID NO:2 (see also Figure 2).

Accordingly, any asserted basis for the rejection of claim 3 (and claims, directly or indirectly, dependent therefrom) is now traversed or rendered moot. Applicants respectfully request that the rejection be withdrawn.

***RE: Claim 17***

According to the Office, claim 17 is vague and indefinite because it is unclear what is encompassed by “an open reading frame of SEQ ID NO:2.” Office Action at page 3, lines 1-4.

By the present amendment to claim 17, any asserted basis for the rejection of claim 17 (and claims, directly or indirectly, dependent therefrom) is now rendered moot. Applicants respectfully request that the rejection be withdrawn.

***Rejections under 35 U.S.C. § 112-1<sup>st</sup> (New Matter) are Traversed or Rendered Moot***

The Office rejected Claims 3-8, 17, 31-33, and 35-38 as allegedly failing to comply with the written description requirement. Based on the foregoing amendment and the following remarks, Applicants respectfully assert that any alleged basis for this rejection is now moot or properly traversed.

According to the Office, "Claim 3 recites the new limitation of "nucleotides 291-2153." Written support could not be found for nucleotides 291-2153 of SEQ ID NO:1. Figure 1 recites that the ORF of SEQ ID NO:1 is nucleotides 291-2156." Office Action at page 3, no. 3, lines 6-8.

Written support for nucleotides 291-2153 of SEQ ID NO:1 is found at least in the underlined nucleotides (*i.e.*, nt 291-2153) shown in Figure 1. As pointed out above, Figure 1 is amended herein to correct a typographical error. More specifically, Figure 1 is amended to recite "(nt 291-2153)" consistent with the underlined nucleotides of Figure 1.

Accordingly, any asserted basis for the rejection of claim 3 (and claims, directly or indirectly, dependent therefrom) is now traversed or rendered moot. Applicants respectfully request that the rejection be withdrawn.

***Rejections under 35 U.S.C. § 112-1<sup>st</sup> (Enablement) are Traversed or Rendered Moot***

The Office rejected Claims 3-8, 17, 31-33, and 35-38 as allegedly lacking enablement. Based on the foregoing amendment and the following remarks, Applicants respectfully assert that any alleged basis for this rejection is now moot or properly traversed.

According to the Office, although nucleotides "291-2156" are enabled, the specification does not reasonably provide enablement for an isolated nucleic acid comprising nucleotides

“291-2153” of SEQ ID NO:1. Office Action at page 4, no. 5, lines 2-11. Moreover, the Office states that “only vaccines comprising the VP2 when linked to the coding region of Hsp70 sequence were shown to provide protection against virulent IPNV (not any disease).” Office Action at page 4, no. 5, lines 14-16. According to the Office, “only vaccines comprising pUKrsxHSP70-ipnVP2 and methods of protecting against disease caused by infection with IPNV (infectious pancreatic necrosis virus) are enabled.” Office Action at page 5, lines 14-16.

Although Applicants respectfully disagree with the Office assertion regarding lack of enablement, in order to advance prosecution, Applicants assert that based on the foregoing amendment and the following remarks, any alleged basis for this rejection is now moot or properly traversed. Regarding nucleotides “291-2153” in claim 3, the enablement requirement is satisfied at least by the “underlined” ORF in Figure 1, wherein said underlined ORF encodes the amino acid sequence shown as SEQ ID NO:2. As pointed out above, Figure 1 is amended herein to correct a typographical error. More specifically, Figure 1 is amended to recite “(nt 291-2153)” consistent with the nucleotides that are actually underlined in Figure 1. Moreover, claim 31 is amended herein to require that “the DNA expression vector further comprises Infectious Pancreatic Necrosis Virus protein 2.” Further, claim 33 is amended herein to require that “the disease is caused by Infectious Pancreatic Necrosis Virus.”

Accordingly, the asserted basis for the rejection is now rendered moot or properly traversed, and Applicants respectfully request that the rejection be withdrawn.

### CONCLUSION

All alleged bases for rejection of Applicants' pending claims have been properly traversed or rendered moot. Accordingly, the present application is in condition for immediate allowance, and early notice to that effect is earnestly solicited.

The Examiner is invited to contact Applicants' undersigned representative using the information provided below if he has any questions or comments regarding this Reply. If any further action other than allowance of all claims is contemplated, Applicants respectfully request that the Examiner contact Applicants' undersigned representative to arrange for a formal interview.

Respectfully submitted,

Date: January 23, 2009

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